THE

CLOCK MAKERS' GUIDE

TO PRACTICAL CLOCK WORK;

WITH A STATEMENT OF MOST OF THE ESSENTIAL ARTICLES

FOR MAKING

EIGHT-DAY AND THIRTY-HOUR CLOCKS,

WHICH ARE DISPLAYED IN

ELEVEN PLATES,

DESCRIPTIVE OF THE PROGRESSIVE MODE OF MANUFACTURING THEM;

WITH DIRECTIONS FOR THE

Dial Makers;

BY

SAMUEL HARLOW, Clock Maker, and Clock Brass Founder.

Birmingham:

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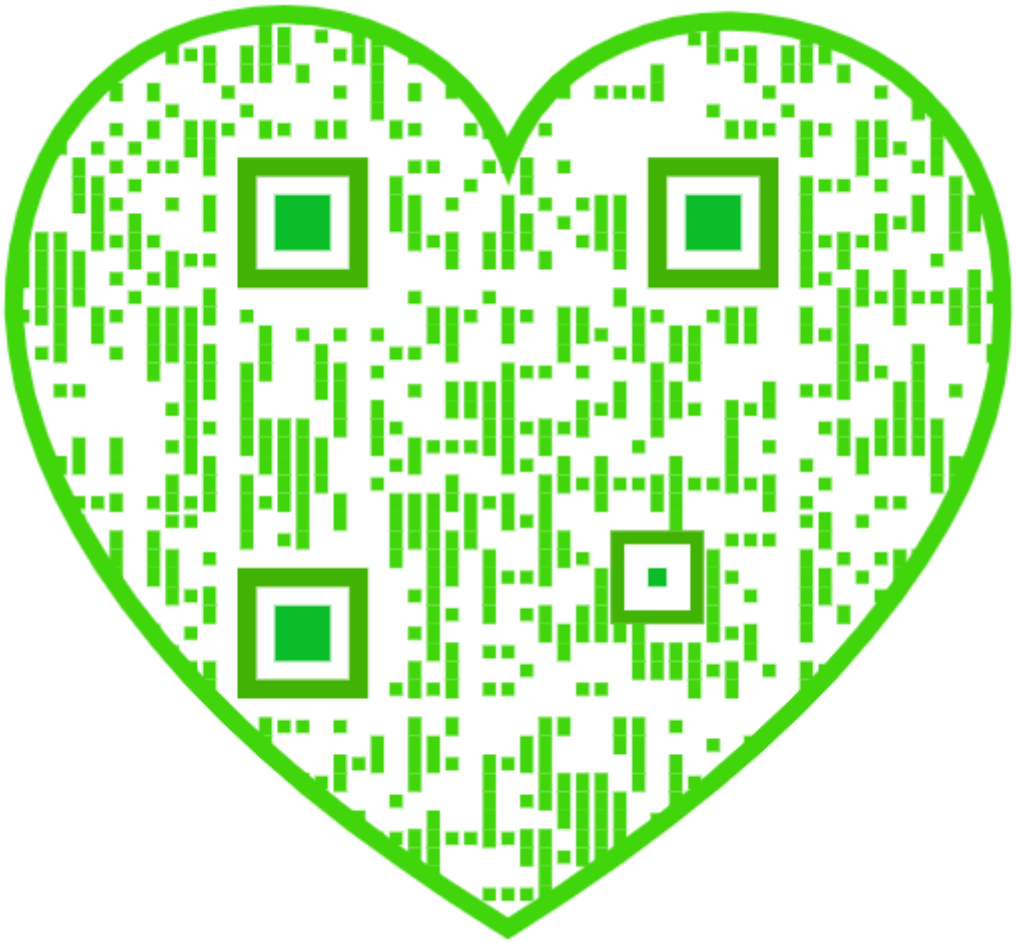

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ADDRESS.

THE utility of the following Designs, I should hope, cannot fail of being duly estimated by the various intelligent Manufacturers concerned in the laudable employment of accurate clock making. It is a circumstance much to be regretted, that a work of this kind has not appeared before this time, to regulate the several departments in manufacturing that highly important and useful article, a CORRECT CLOCK. A want of a regular system in clock making, has created great inaccuracies and inconvenience, and it is to obviate these evils, that I now humbly and respectfully submit the following Plates to the consideration of the Trade; taking no merit to myself, farther than the greatest accuracy, I however feel confident, that if Dial and Movement Makers observe the rules here laid down, the movements and dial will fit with the utmost exactness—the Pinion Makers may also make their pinions to size. I am of opinion, that the mode of shifting the moon wheel, in the manner described, will be found, by experience, to be the best and surest method which can be devised; the Clock-case Maker will be enabled to cut his clock case sides to fit the clocks, by taking his dimensions from the centre holes.

There are various other methods of making clocks, but I take the liberty to recommend the following, convinced there is no better, when well executed. *SAMUEL HARLOW.*

S. HARLOW, respectfully informs the Trade, that he manufactures Moon Wheels, to suit any size Dial, also Caliper Plates, correct for Dial Makers. The Socket Pinion, and Star Wheel, will be sent with the Dials. Likewise may be had of him, Chime-quarters, or plain Movements, made by the best hands, (to go with Spring or Weight) also Engines, Lathes, Tools, Files, or Materials proper for the Business of Clock Making.

THE

CLOCK MAKERS' GUIDE, &c.

PLATE I.

THIS Plate represents the inside caliper of an eight day movement, with the wheels drawn in their proper places. The pillars marked out in each corner, with the place for the hammerdetent, as it is essential to be planted where it will draw the easiest. The Plate is divided into four quarters, with a scale to give directions for any alteration, which will be most correct, taken from the centre lines shewn in the Plates. The parts of the circles shew the depth of the teeth.

PLATE II.

This Plate points out the proper repeating work, with their caliper. As also the moon wheel (A) and month wheel (B) for round month, with the holes for the dial feet marked No. 1, for long feet, instead of the back Plate, generally put on by the Birmingham dial makers. The small engraving on the moon wheel is the warning piece through the front Plate.

PLATE III.

This Plate represents the pinions with the collets soldered on their proper places, with the pevots and shoulders of the collets all of them with letters denoting what they are, viz. V verge, S swing, C centre, P pin, G grappler or stop, and W warning wheels. The centre pinion shews the socket, with shoulder to square the minute pipe by, and to shew the height of the hand; the swing wheel pinion shews also the seconds socket, with the height that the seconds hand is to be fixed; the third wheel and fly pinions are omitted, being plain.

PLATE IV.

This Plate shews the barrel, with diameter and width, also the shoulders and squares on the arbors; the four studs with the height of the heads, marked L P lifting piece stud, R rack, L latch or hook, and M W minute wheel stud, also the bridge and hour socket, with height of shoulder for the hour hand; also, the dial foot for their length. The letters H D, and H S, shews where the hammer spring is to be fixed. The holes for the cock, and crutch hole in the back pillar plate is also shewn. This Plate also shews a moon wheel socket or cock, to be planted over the seconds hole, with the pinion to run in the moon wheel, it being rounded off; with a star wheel of twelve points, to come down to the hour wheel socket, as is shewn in Plate No. 11, and shifted with a pin, which is the surest way, and not liable to be out of order. The mark on the dial foot, shews the length of those used for the back plates.

PLATE V.

The articles described on this Plate, merely shew the form or shape, and lengths before put together.

PLATE VI.

This Plate shews a drawing of the inside of a thirty hour centre pinion movement, with the number of the wheels, the planting of the bridge, the caliper for the dial work, and dial, with stud, lifting piece, and the detents for hoop locking.

PLATE VII.

This Plate shews the length of the arbors, and their shoulders; (for the movements described on plate 6) the pinions with their numbers of the watch part; the places for the collets; the length of the hour socket minutes and seconds, verge, locking hook and stud, detents, &c. All thirty hours centre pinion movements, are best made with hoop wheel, and hoop locking.

PLATE VIII.

This Plate shews the inside caliper of a thirty hours shake minute clock, with dial wheels; it shews also the holes for the pillars, and a small hole for the hammer detent. D. S. is the dial stud, for the proper height of the head; the warning hole, the pillar and dial feet holes with the lifting piece.

PLATE IX.

This Plate shews the main wheel, arbors, pinions, and verge, with their shoulders and collets; also, a pillar and dial foot; the hour socket and minute pipe, for the height of the hands, and also a fly.

PLATE X.

This Plate shews the back Plate with the locking wheel, as planted, nut spring and stud, for thirty hours movements, with pins in the locking wheel, with lifting piece, detent, and locking hook; also the pulley and chain. It is a very essential thing to have the chains and pullies correct; it is necessary the chain makers make their chains all the same size, as no other size is required. The lifting piece is covered with brass, in the form described.

PLATE XI.

This Plate represents the star wheel, with twelve points, for shifting the moon as described on the Plate No. 4. This Plate also represents the back plate, commonly used by the Birmingham Dial Makers, which, if put on correct, might save the workman a great deal of trouble. All the dial feet holes may be cast in, and the workman, with a proper caliper plate, might lay it upon his work, with the greatest exactness; the month wheel is shewn, which may be shifted without the dial, if made to the exact size, by the dial makers.

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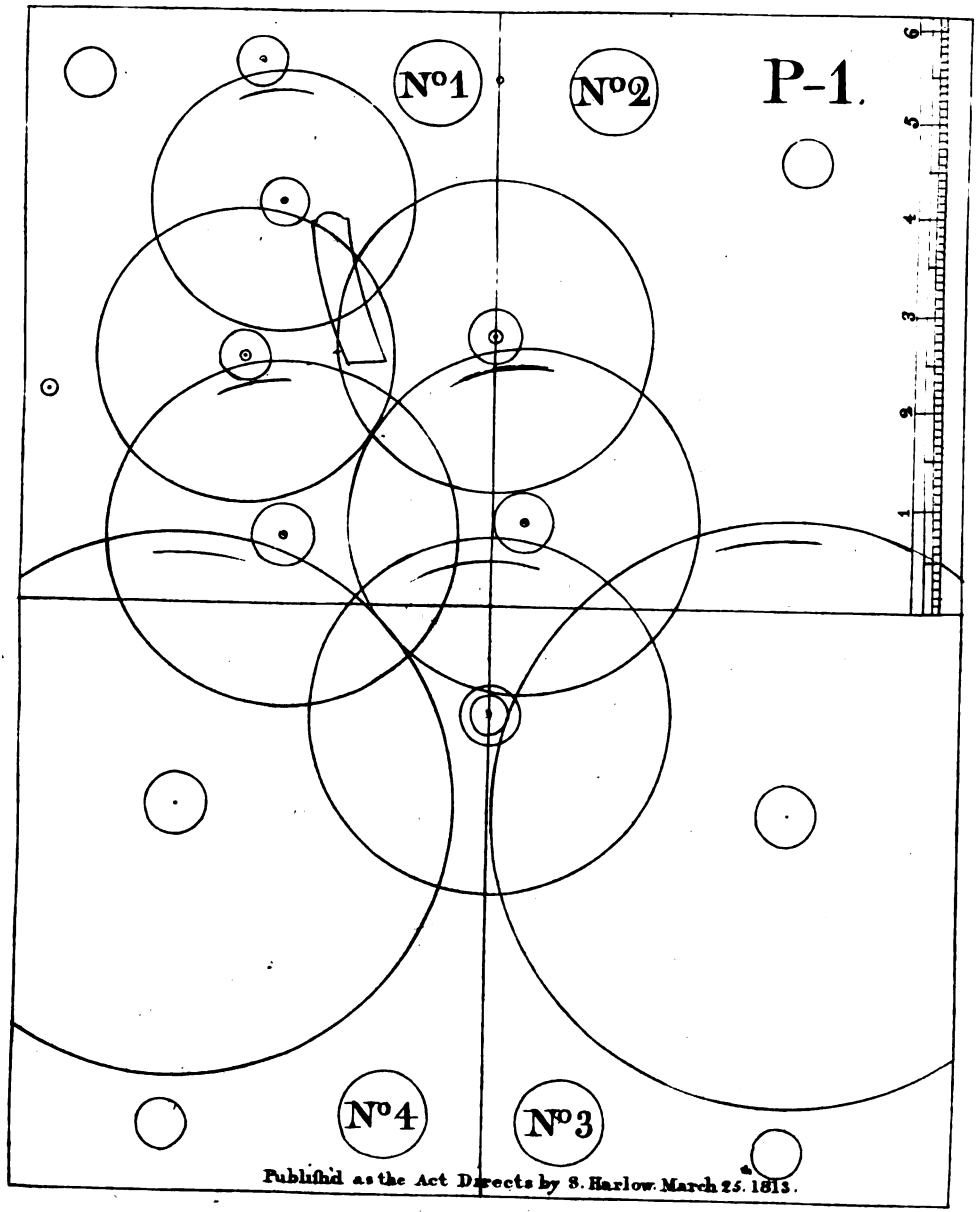
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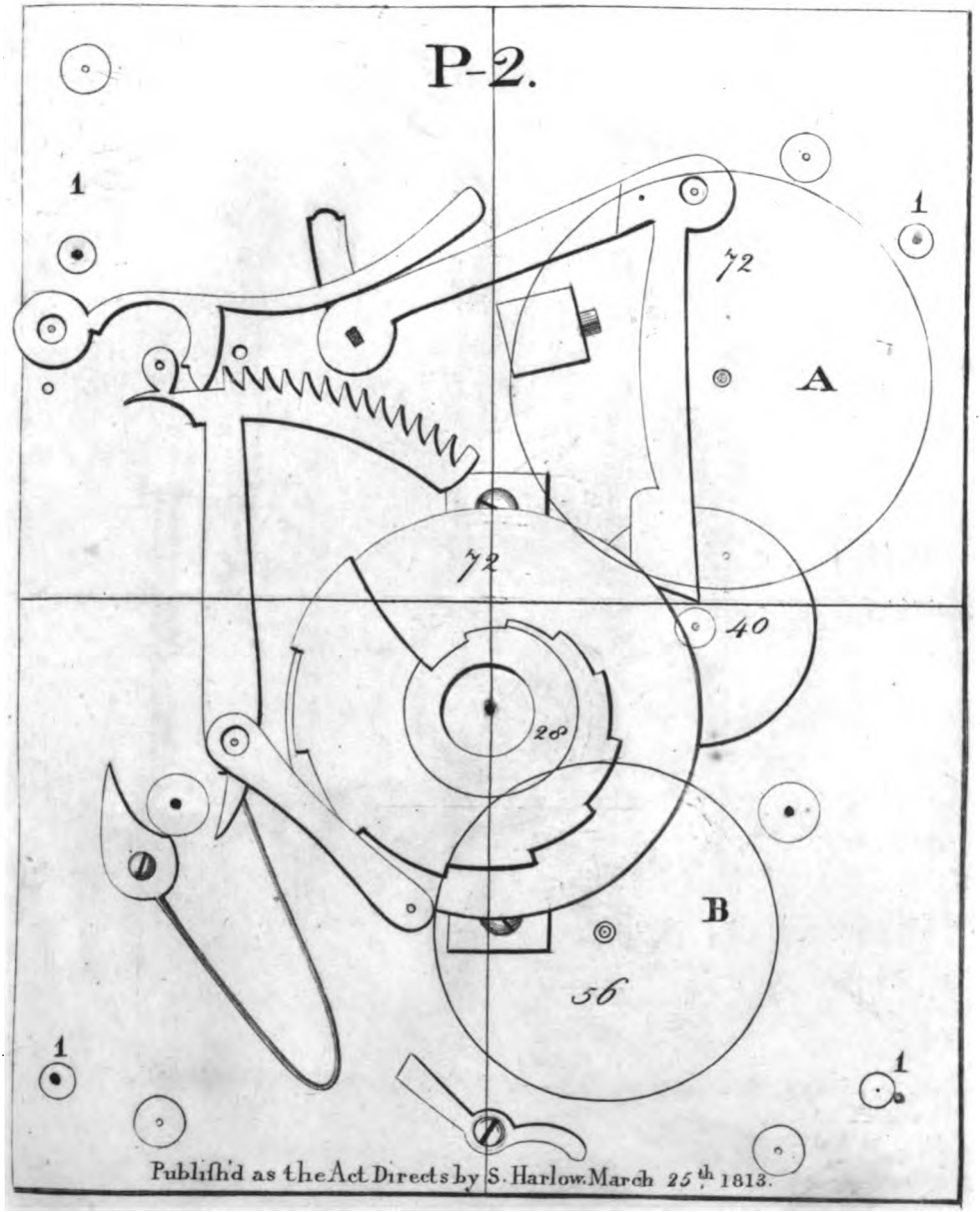
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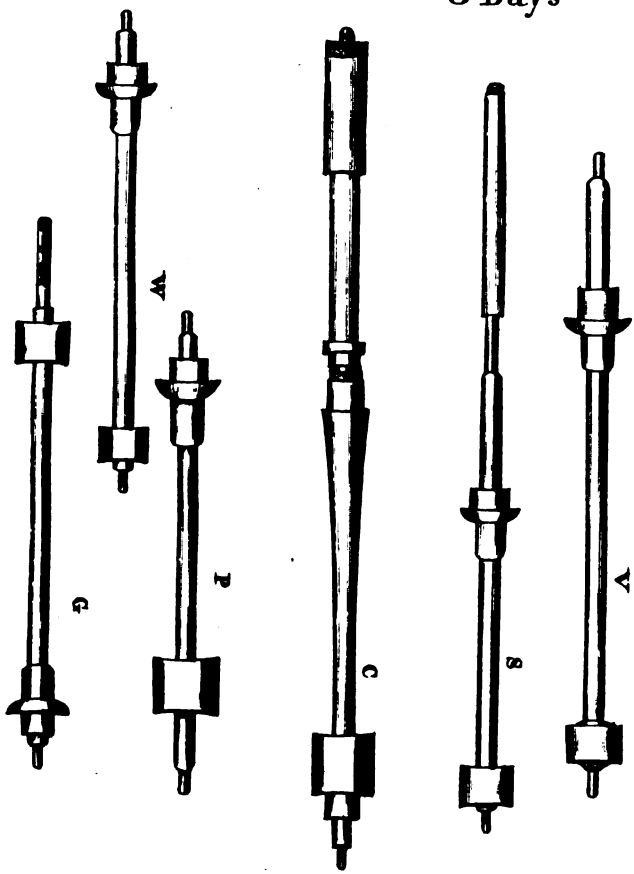

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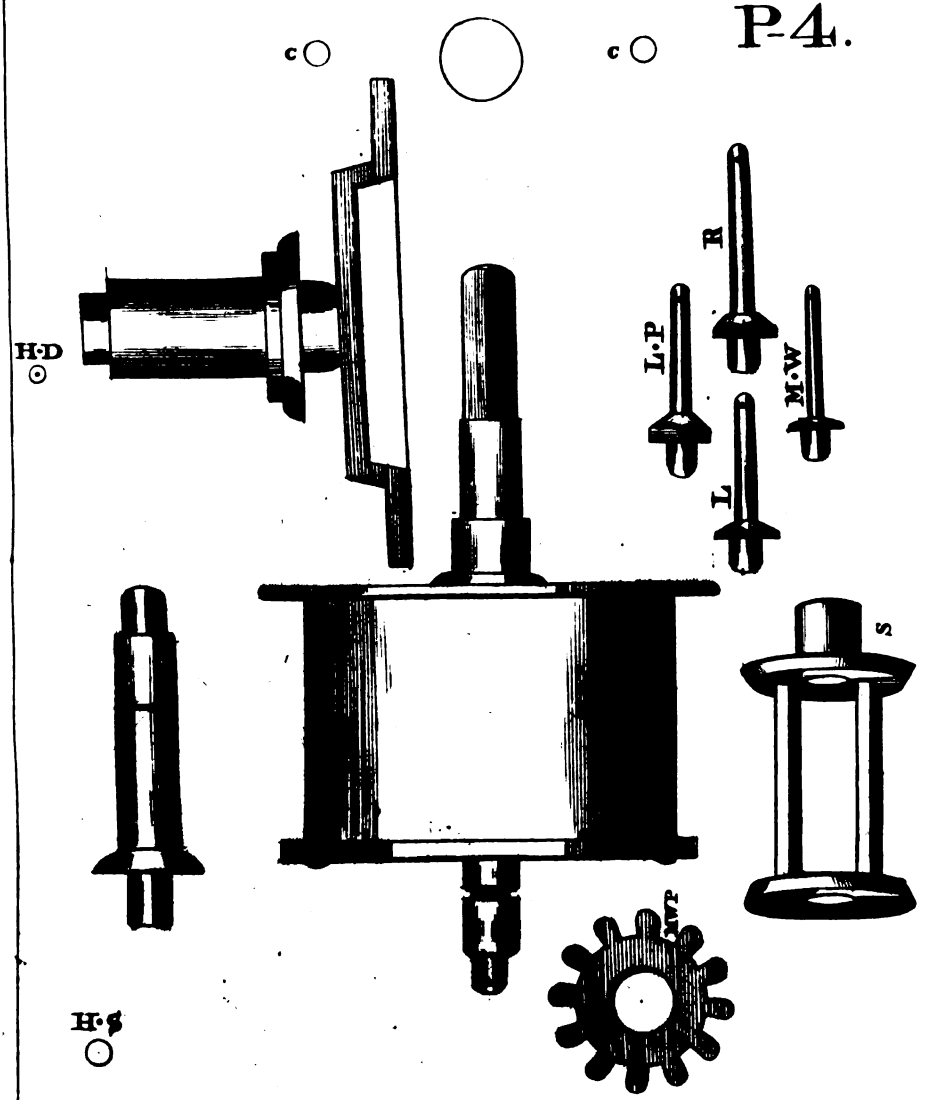

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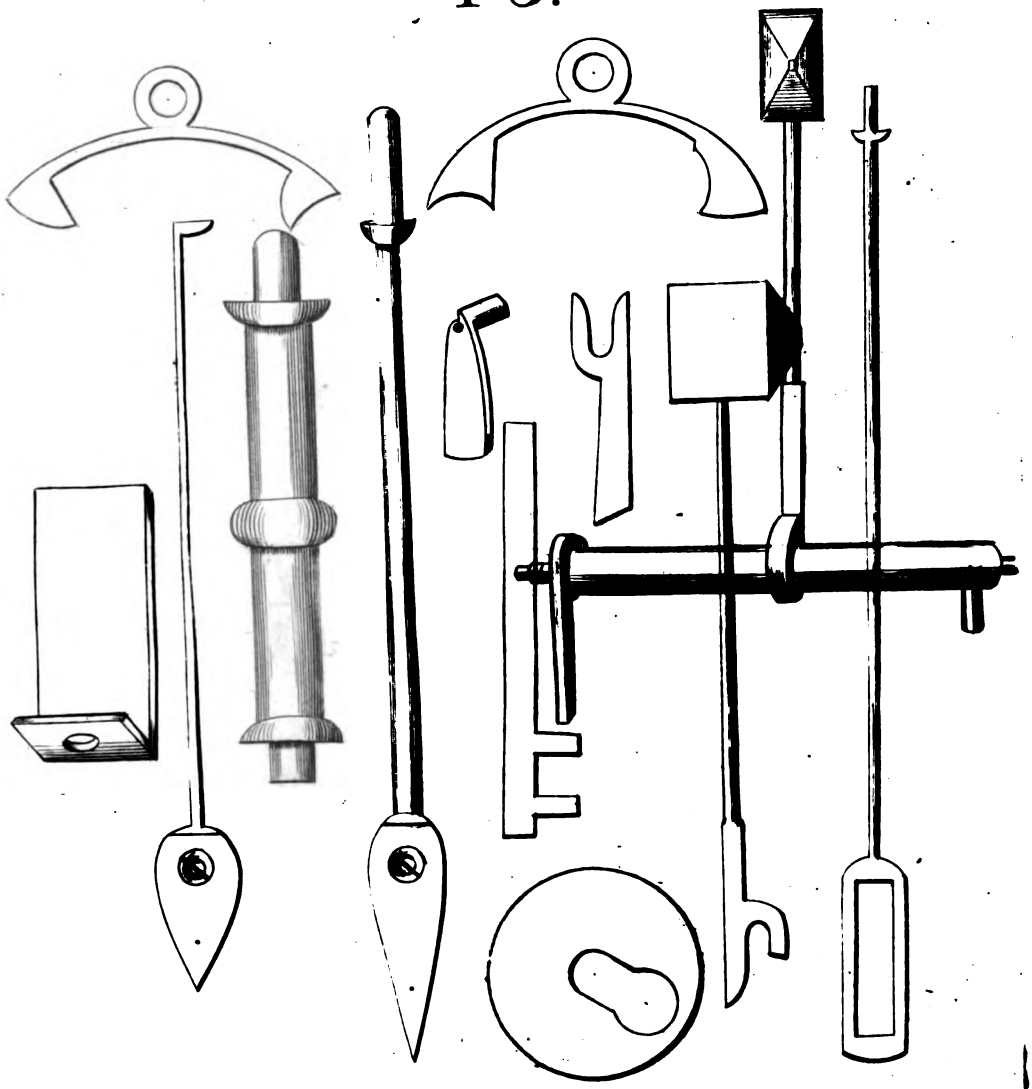

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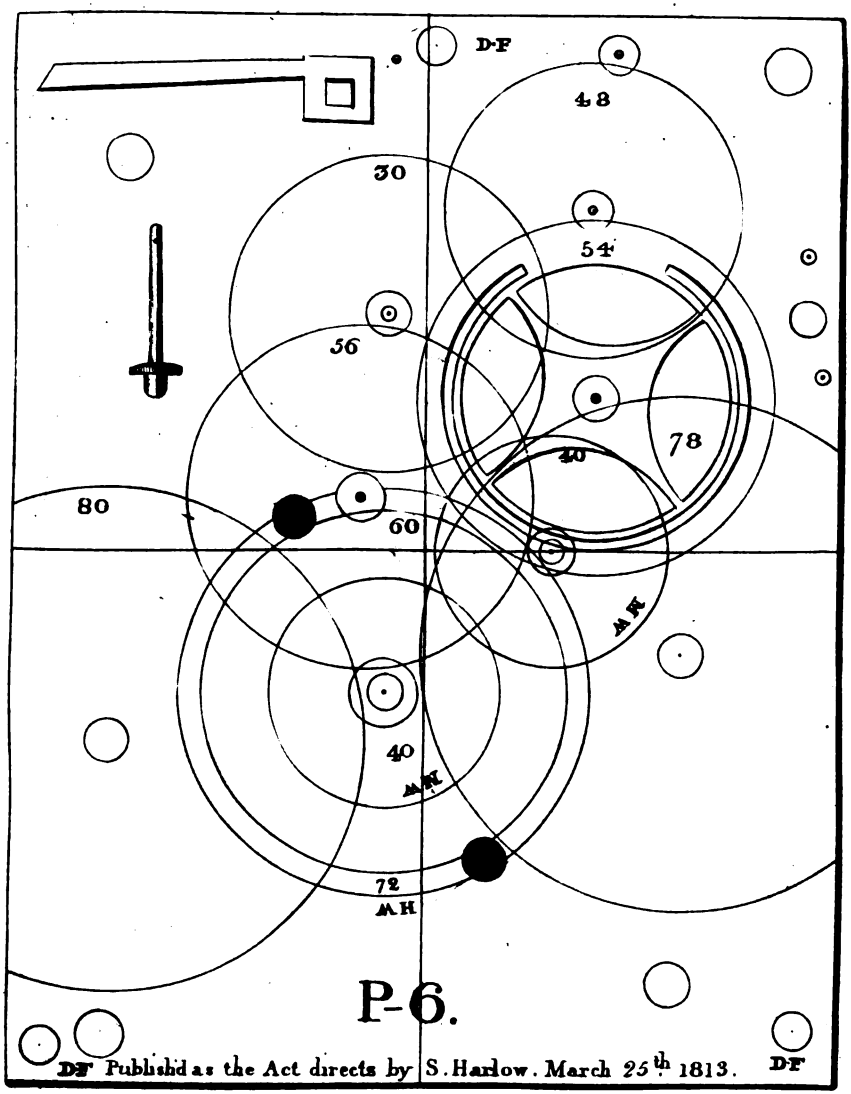

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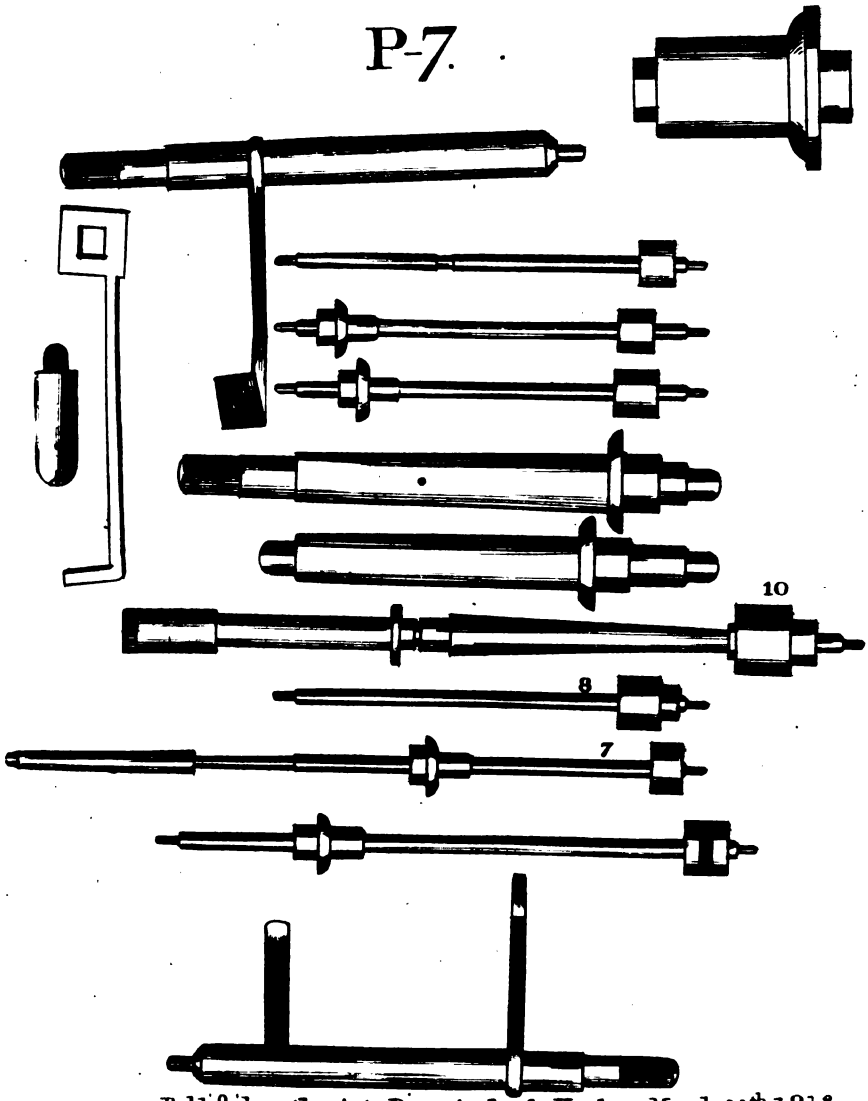

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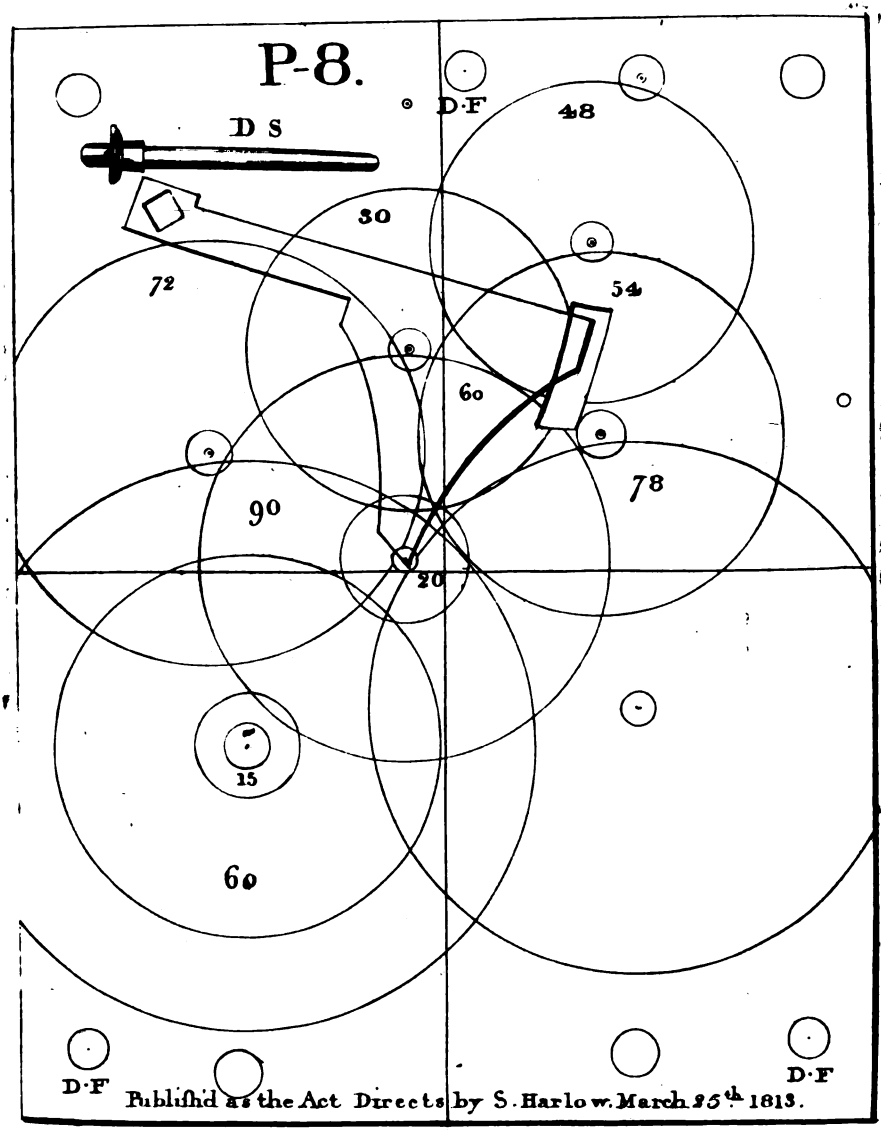
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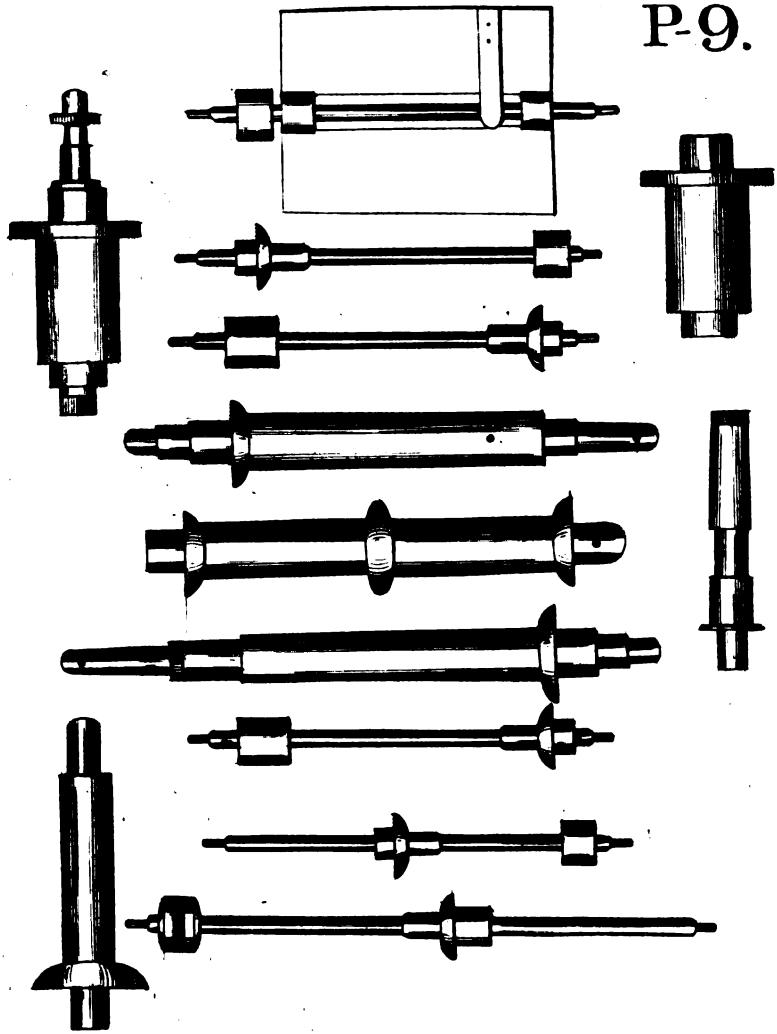

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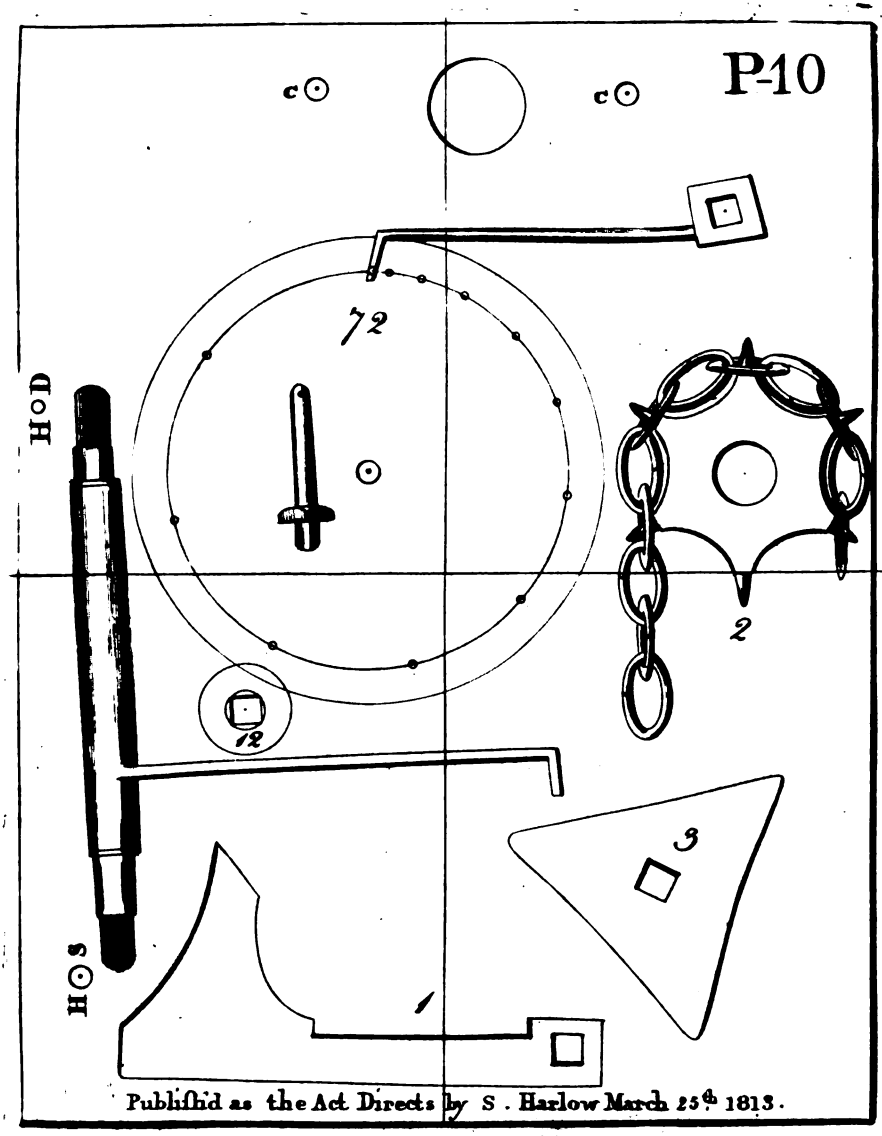

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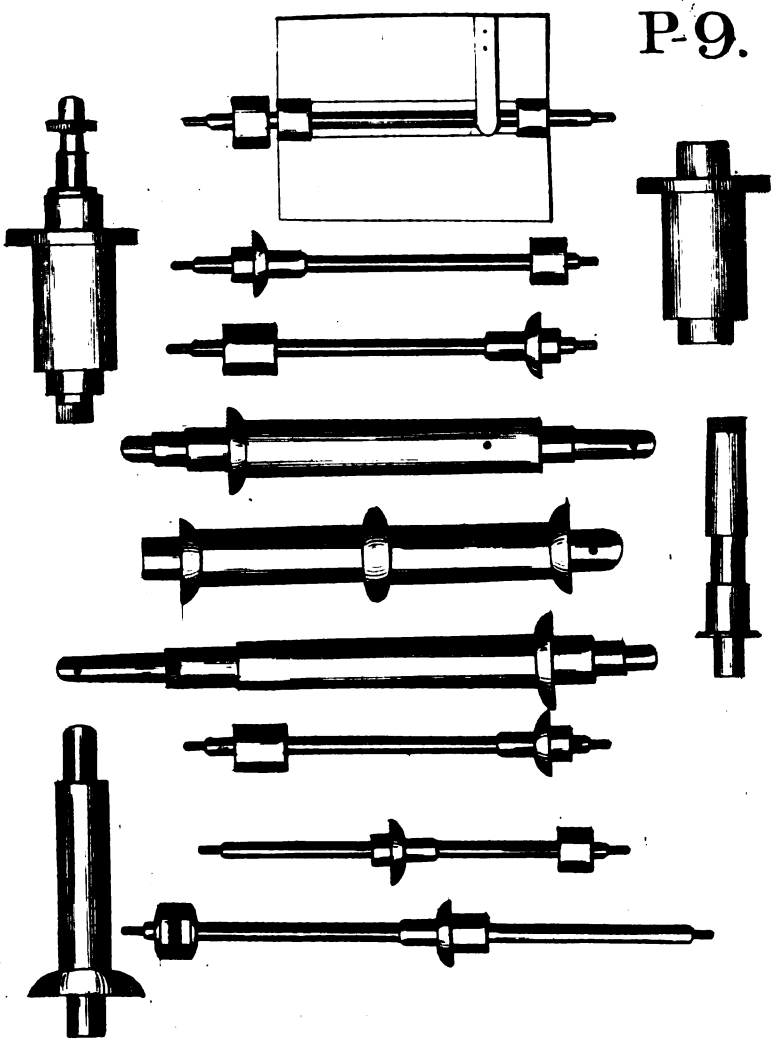

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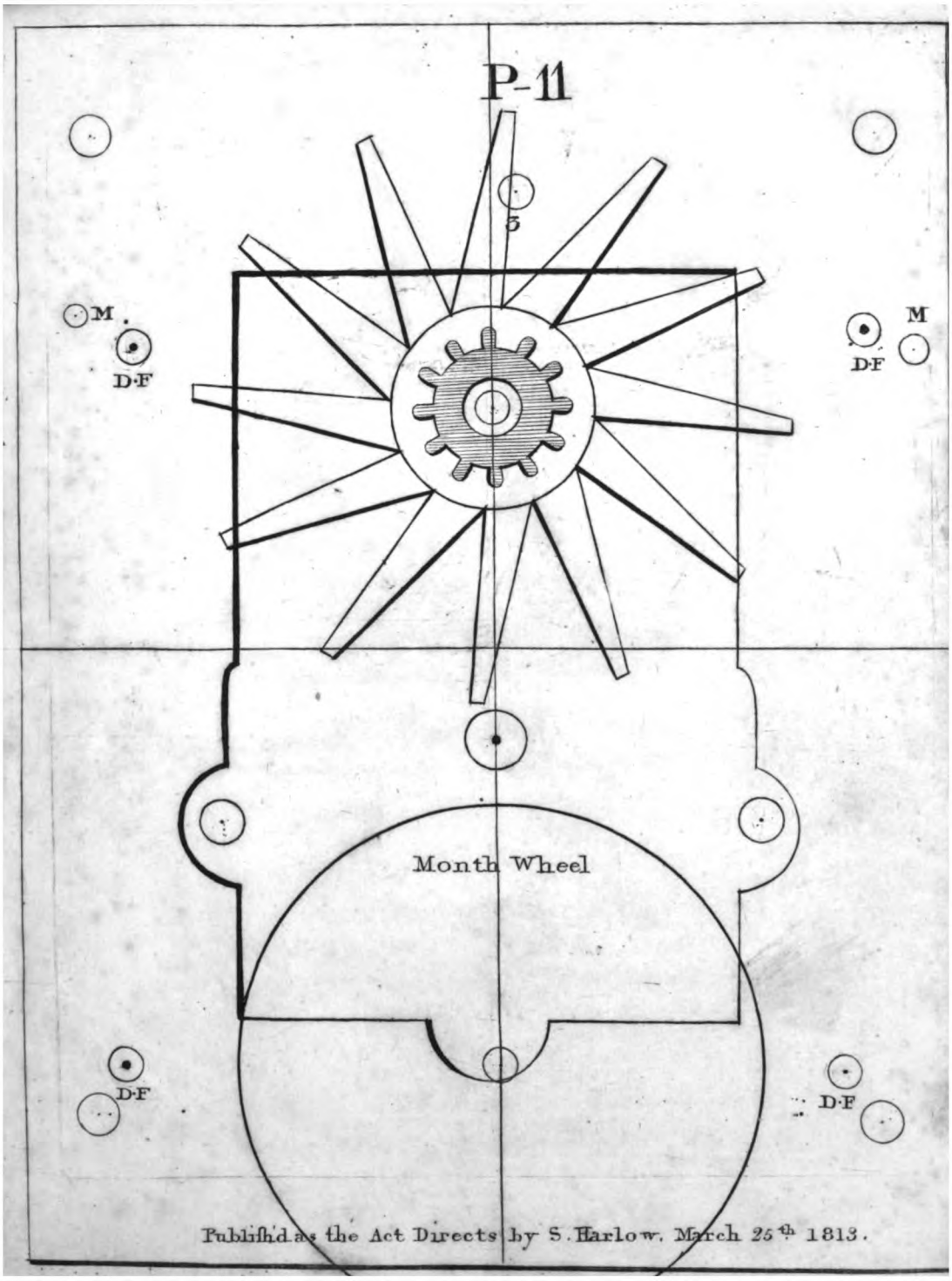
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